



Invasive Exotic Plants That Threaten Parks and Natural Areas in Alexandria

Invasive exotic plants have increasingly become a major threat to natural areas, parks, forests, and wetlands by displacing native species and wildlife and significantly degrading habitats. Today, they are considered perhaps the greatest threat to natural areas and global biodiversity, second only to habitat loss resulting from development and urbanization (Vitousek et al. 1996).

The Virginia Department of Conservation and Recreation and the Virginia Native Plant Society have identified 109 invasive exotic plants that threaten natural areas and lands in Virginia (VA-DCR 2009) and Swearingen et al. (2010) include 80 plants from a list of nearly 280 invasive exotic plant species documented within the mid-Atlantic region. Largely overlapping with these and other regional lists are 85 species that were documented for the City of Alexandria, Virginia during natural resource assessments and vegetation surveys by the City Dept. of Recreation, Parks, and Cultural Activities (RPCA), Horticulture and Natural Resources Section.

Exotic species are those that are not native to a particular place or habitat, as a result of human intervention. An invasive exotic plant is here defined as one that exhibits some degree of invasiveness, whether dominant and widespread in a particular habitat or landscape – regardless of the quality or condition of the site – or much less common but long-lived and extremely persistent in places where it occurs. The presence of invasive exotic plants is largely the result of soil and habitat disturbance, though many of these species are capable of eventually spreading from degraded areas into relatively undisturbed sites, such as interior forest.

Hundreds of exotic plants, growing in a variety of habitats, occur in the City of Alexandria. Many of these are widespread, early spring-blooming annuals of lawns and open disturbed areas, such as Chickweeds (*Stellaria* spp.), Speedwells (*Veronica* spp.), Hairy Bittercress (*Cardamine hirsuta*), and others. Some, like Mugwort (*Artemisia vulgaris*), Bermuda Grass (*Cynodon dactylon* var. *dactylon*), and Dandelion (*Taraxacum officinale*), are familiar, difficult to eradicate perennial weeds of lawn and garden. Many others are commonly visible along roadways, medians, cracks in pavement, industrial sites, and other highly disturbed places.

However, only exotic plants that are especially invasive, damaging, and persistent, including species that produce a pervasive seed bank and those that prevent natural succession by native plants, are included on the following list. Native species that are occasionally weedy in disturbed areas, such as Black Locust (*Robinia pseudoacacia*) and Black Cherry (*Prunus serotina*), are of course not included because they are not invasive exotic species, they do not degrade natural areas, and they are important components of natural habitats.

Invasive exotic plants occurring within the City of Alexandria are actively monitored by the RPCA Natural Resources Division, Horticulture and Natural Resources Section, which also coordinates and oversees various control efforts, including joint projects with other City depts. and staff, partner organizations, and volunteers.

Herbaceous Plants

*Garlic Mustard (*Alliaria petiolata*)
Joint-head Arthraxon (*Arthraxon hispidus*)
Knapweed (*Centaurea* spp.)
Canada Thistle (*Cirsium arvense*)
*Common Thistle (*Cirsium vulgare*)
Smallflower Umbrella Sedge (*Cyperus difformis*)
Broad-leaved Helleborine (*Epipactis helleborine*)
Weeping Lovegrass (*Eragrostis curvula*)
*Lesser Celandine (*Ficaria verna*) [= *Ranunculus ficaria*]
*Ground Ivy (*Glechoma hederacea*)
Orange Day Lily (*Hemerocallis fulva*)
Hydrilla (*Hydrilla verticillata*)
Yellow Flag Iris (*Iris pseudacorus*)
Asiatic Greenhead Sedge, Pasture Spikesedge (*Kyllinga gracillima*)
*Sericea Bushclover (*Lespedeza cuneata*)
Lilyturf (*Liriope muscari*)
Floating Seedbox (*Ludwigia peploides*)
Annual Honesty, Money Plant (*Lunaria annua*)
Purple Loosestrife (*Lythrum salicaria*)
*Japanese Stiltgrass (*Microstegium vimineum*)
Chinese Silvergrass, Eulalia Grass (*Miscanthus sinensis*)
Marsh Dewflower (*Murdannia keisak*) [= *Aneilema keisak*]
Parrot-Feather (*Myriophyllum aquaticum*)
Eurasian Watermilfoil (*Myriophyllum spicatum*)
Java Dropwort (*Oenanthe javanica*)
Dallisgrass (*Paspalum dilatatum*)
Chinese Fountaingrass (*Pennisetum alopecuroides*)
Beefsteak Plant (*Perilla frutescens*)
Long-bristled Smartweed (*Persicaria longiseta*) [= *Polygonum caespitosum*]
Common Reed (*Phragmites australis* ssp. *australis*)
Japanese Knotweed (*Reynoutria japonica*) [= *Polygonum cuspidatum*]
Giant Knotweed (*Reynoutria sachalinensis*) [= *Polygonum sachalinense*]
Curly Dock (*Rumex crispus* ssp. *crispus*)
Crown Vetch (*Securigera varia*) [= *Coronilla varia*]
Yellow Foxtail Grass (*Setaria pumila*)
Green Foxtail Grass (*Setaria viridis*)
Johnson Grass (*Sorghum halepense*)
Common Vetch (*Vicia sativa*)
Youngia, Asiatic Hawk's Beard (*Youngia japonica*) [= *Crepis japonica*]

Vines

Five-leaf Akebia (*Akebia quinata*)
*Porcelainberry (*Ampelopsis brevipedunculata*)
*Oriental Bittersweet (*Celastrus orbiculatus*)
*Sweet Autumn Clematis (*Clematis terniflora*)
Chinese Yam (*Dioscorea polystachya*) [= *Dioscorea batatas*]
*Winter-creeper (*Euonymus fortunei*)
*English Ivy (*Hedera hibernica*) [According to Arthur Tucker, pers. comm. 2011, *H. hibernica* is

tetraploid and possibly a hybrid of *H. helix* x *H. maderensis* and is a noxious weed widely spread by birds. *H. helix* is diploid and usually not invasive.]

- *Japanese Honeysuckle (*Lonicera japonica*)
- Mile-a-minute Weed (*Persicaria perfoliata*) [= *Polygonum perfoliatum*]
- Kudzu (*Pueraria montana*)
- Common Periwinkle (*Vinca minor*)
- Japanese Wisteria (*Wisteria floribunda*)
- Chinese Wisteria (*Wisteria sinensis*)

Shrubs

- Common Bamboo (*Bambusa vulgaris*)
- Japanese Barberry (*Berberis thunbergii*)
- Autumn Silverberry (*Elaeagnus pungens*)
- Autumn Olive (*Elaeagnus umbellata*)
- *Burning Bush (*Euonymus alatus*)
- Rose of Sharon (*Hibiscus syriacus*)
- Japanese Holly (*Ilex crenata*)
- Privet (*Ligustrum* spp.) [Chinese Privet (*Ligustrum sinense*), Common Privet (*Ligustrum vulgare*), Japanese Privet (*Ligustrum japonicum*), and Glossy Privet (*Ligustrum lucidum*) all occur in Alexandria; with Chinese Privet by far the most abundant, Glossy Privet increasing in abundance, and Common and Japanese privets rare.]
- *Amur honeysuckle (*Lonicera maackii*)
- Leatherleaf Mahonia (*Mahonia bealei*)
- Holly Osmanthus (*Osmanthus heterophyllus*)
- Golden Bamboo (*Phyllostachys aurea*)
- Arrow Bamboo (*Pseudosasa japonica*)
- *Multiflora Rose (*Rosa multiflora*)
- Himalayan Blackberry (*Rubus bifrons*)
- *Wineberry (*Rubus phoenicolasius*)
- Linden Arrow-wood (*Viburnum dilatatum*)
- Tea Viburnum (*Viburnum setigerum*)

Trees

- Norway Maple (*Acer platanoides*)
- *Tree-of-Heaven (*Ailanthus altissima*)
- *Mimosa, Silk Tree (*Albizia julibrissin*)
- Siberian Crabapple (*Malus baccata*)
- Japanese Flowering Crabapple (*Malus floribunda*)
- Flowering Crabapple (*Malus* spp.) [Includes hybrids of *M. baccata* and *M. floribunda* and other exotic *Malus* species]
- *White Mulberry (*Morus alba*)
- Princess Tree (*Paulownia tomentosa*)
- Sweet Cherry (*Prunus avium*)
- *Higan Cherry (*Prunus subhirtella*)
- *Callery Pear, Bradford Pear (*Pyrus calleryana*) [Includes all named varieties and cultivars of *P. calleryana*, such as “Aristocrat”, “Autumn Blaze”, “Chanticleer”, “Cleveland Select”, “Redspire”, “Whitehouse”, etc.]
- Sawtooth Oak (*Quercus acutissima*)
- *European White Willow (*Salix alba*)

Crack Willow (*Salix fragilis*)
*Siberian Elm (*Ulmus pumila*)

* Species that are particularly invasive and destructive in Alexandria.

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Citation:

Simmons, R.H. 2012. Invasive exotic plants that threaten parks and natural areas in Alexandria. City of Alexandria Dept. Recreation, Parks, and Cultural Activities, Alexandria, Virginia.

Revised July 2012